

CLAIMS

What is claimed is:

- 5 1. A method for creating a view of a system of networked components, the method comprising the steps of:
 storing in a memory object of each component data representative of the respective component and of a physical configuration of the component;
 accessing the data from the memory objects via a data network;
 generating a user viewable representation of the system based upon the data, the
10 representation including representations of each component and a physical representation of the system.
- 15 2. The method of claim 1, wherein the data representative of the physical configuration of the component includes data representative of a location of the component in the system.
- 20 3. The method of claim 1, wherein the data representative of the physical configuration of the component includes data representative of a physical dimension of a subunit of the system in which the component is located.
- 25 4. The method of claim 1, wherein the user viewable representation is provided in a window area of a computer monitor.
5. The method of claim 1, wherein the user viewable representation includes a dimensionally approximate representation of each component and a location of the component with respect to other components of the system.
6. The method of claim 1, wherein the user viewable representation includes indicia representative of an operational status of each component.

7. The method of claim 1, comprising the further step of defining a database for the system including the data stored in each memory object.
- 5 8. The method of claim 7, wherein the data stored in each memory object is downloaded into the memory object from the database.
- 10 9. The method of claim 1, wherein the user viewable representation is provided at a monitoring station coupled to the system via the data network.
- 15 10. The method of claim 9, wherein the memory objects are reprogrammable by the monitoring station.
- 20 11. The method of claim 9, wherein the monitoring station accesses a database containing system description data for generation of the user viewable representation.
- 25 12. The method of claim 11, wherein the database includes configuration data referenced in accordance with the data stored in the memory objects of the components.
- 30 13. The method of claim 1, wherein the user viewable representation includes a plurality of links to user viewable representations of detailed data for each component.
14. A method for generating a physical layout representation of a system of networked electrical components, the method comprising the steps of:
generating a database for the system including component designation data representative of programmable components of the system, and physical location data representative of a physical location of the programmable components in the system;
storing the component designation data and the physical location data for each component in a dedicated memory of the respective component;
accessing the component designation data and the physical location data via a data network; and

generating a representation of the system in a user viewable format, the representation including a physical representation of the components positioned in an approximate relative position with respect to other components of the system.

5 15. The method of claim 14, wherein the representation is generated on a computer workstation linked to the system via the data network.

10 16. The method of claim 15, wherein the workstation accesses the database for additional data descriptive of each component.

15 17. The method of claim 15, wherein the workstation access the database for data representative of spacing between components.

20 18. The method of claim 15, wherein the dedicated memory of each component is reprogrammable via the workstation.

25 19. The method of claim 14, wherein the representation includes a representation of a status of each component displayed in real time.

20 20. The method of claim 14, comprising the further step of storing in the dedicated memory component data representative of a physical dimension of a subunit of the system in which the component is located.

25 21. The method of claim 14, wherein the representation is provided in a window area of a computer monitor.

22. The method of claim 14, wherein the representation includes a dimensionally approximate representation of each component.

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23. The method of claim 1, wherein the representation includes indicia

representative of an operational status of each component.

5 24. A method for generating and displaying a real time elevational view of an electrical system including a plurality of programmable components disposed in an enclosure set, each component including a resident read/write memory object, the method comprising the steps of:

10 storing component designation data and physical configuration data in the memory object of each programmable component, the component designation data including data identifying the respective component, and the physical configuration data including data identifying a physical disposition of the respective component in the enclosure set;

15 polling the components for the component designation data and the physical disposition data; and

20 generating a real time elevational view of the system based upon the component designation data and the physical disposition data.

25 25. The method of claim 24, comprising the further step of generating a database including the component designation data and the physical disposition data.

20 26. The method of claim 25, wherein the step of storing includes accessing data from the database and downloading the data into the respective components.

25 27. The method of claim 25, including the further step of accessing additional data descriptive of each component from the database.

28. The method of claim 24, wherein the elevational view is displayed on a computer monitor.

30 29. The method of claim 24, wherein the physical disposition data includes data representative of coordinates of the respective component in the enclosure set.

30. The method of claim 24, wherein the elevational view includes indicia of an operational state of each component.
- 5 31. The method of claim 24, wherein the elevational view includes links to user viewable pages displaying detailed data for each component.
- 10 32. A networked electrical system comprising:
a plurality of electrical components, each component including a memory object allocated for component designation data and physical location data, the component designation data including data identifying the respective component, and the physical configuration data including data identifying a physical disposition of the respective component in the system;
a data network linking the electrical components; and
a monitoring station linked to the electrical components via the network, the monitoring station including a user viewable display and a processor configured to access the component designation data and the physical location data from the components via the network and to generate and display a representation of the system on the display based upon the component designation data and the physical location data.
- 20 33. The system of claim 32, wherein the monitoring station is configured to poll the components for the component designation data and the physical disposition data.
- 25 34. The system of claim 32, wherein the components are disposed in an enclosure set, and wherein the representation includes an elevational view of the system wherein the component locations within the enclosure set are approximately depicted.
35. The system of claim 32, wherein the components include electrical power control components adapted to control electrical power to a load.

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36. The system of claim 35, wherein the components include a motor starter.
37. The system of claim 35, wherein the components include a variable frequency motor controller.
38. The system of claim 35, wherein the components include an overload relay.
39. A networked motor control center comprising:
a plurality of electrical power control components disposed in an enclosure set, each component including a memory object for storing component designation data and physical configuration data, the component designation data including data identifying the respective component, and the physical configuration data including data identifying a physical disposition of the respective component in the enclosure set;
a data network linking the electrical components; and
a monitoring station linked to the electrical components via the network, the monitoring station including a user viewable display and a processor configured to access the component designation data and the physical location data from the components via the network and to generate and display a representation of the system on the display based upon the component designation data and the physical location data.
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40. The motor control center of claim 39, wherein the representation includes a depiction of each component in a location of the enclosure set corresponding to a location defined by the physical configuration data.
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41. The motor control center of claim 39, wherein the representation includes a depiction of each component having approximately a proportional size of the component as compared to other components.

42. The motor control center of claim 39, wherein the monitoring station monitors operational parameters of the components, and wherein the representation includes links to user viewable pages displaying the operational parameters.

5 43. The motor control center of claim 39, wherein the monitoring station is remote from the enclosure set.

44. The motor control center of claim 39, wherein the monitoring station includes a database for the components and accesses data for the components from the database based upon the component designation data.

45. The motor control center of claim 39, wherein the monitoring station is configured to access data via a wide area network.

15 46. The motor control center of claim 45, wherein the wide area network includes the Internet.